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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,346	10/12/2001	Jinwen Zhang	P04706US2	2317

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801 GRAND AVENUE
SUITE 3200
DES MOINES, IA 50309-2721

EXAMINER

KAM, CHIH MIN

ART UNIT	PAPER NUMBER
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1653

DATE MAILED: 08/11/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,346

Applicant(s)

ZHANG ET AL.

Examiner

Chih-Min Kam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____.

DETAILED ACTION

1. The preliminary amendment filed July 22, 2002 has been entered.

Claim Rejections-Obviousness Type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-16 and 23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-12 of copending application No. 09/564,005 (the allowable claims). Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-16 and 23 in the instant application discloses a non-toxic biodegradable plant protein composite comprising 5-90 parts soy protein and 90-5 parts polylactide. This is obvious in view of claims 2-12 of copending application which discloses a non-toxic biodegradable plant protein composite comprising a plant protein, 5-95 parts by weight; and polylactide, 95-5 parts by weight, wherein composite total does not exceed 100 parts. Both the claims of instant application and the claims of the copending application are directed to a non-toxic biodegradable plant protein composite comprising a plant protein component having 5-90 parts and a polylactide component having 90-5 parts. Thus,

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claims 1-16 and 23 in present application and claims 2-12 of copending application are obvious variations of a non-toxic biodegradable plant protein composite comprising a soy protein component having 5-90 parts and a polylactide component having 90-5 parts.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1-16 and 19 are indefinite because of the use of the term “said composite comprising: 5 to 90 parts soy protein; and 90 to 5 parts of a polylactide”. The term “said composite comprising: 5 to 90 parts soy protein; and 90 to 5 parts of a polylactide” renders the claim indefinite, it is unclear what composition the composite has, e.g., whether “parts” of soy protein or polylactide is measured by weight or by volume? whether “the parts” for each component to be in the ranges such that the sum of the parts of each component is equal to 100, less than 100 or more than 100? Claims 2-16 are rejected for being dependent on a rejected claim and not correcting the deficiency of the claim from which it depend. See also claim 19.
5. Claim 10 is indefinite because of the use of the term “adipic/acetic anhydride”. The term “adipic/acetic anhydride” renders the claim indefinite, it is unclear whether the

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term means a mixture of adipic anhydride and acetic anhydride, or a compound obtained from adipic anhydride and acetic anhydride.

6. Claim 12 is indefinite because of the use of the term “0-0.6 parts glutaric dialdehyde”. The term “0-0.6 parts glutaric dialdehyde” renders the claim indefinite, it is unclear whether parts of glutaric dialdehyde is measured by weight or by volume? Claim 12 is also indefinite because the claim does not conform the limitation of the independent claim, which cites the inclusion of a cross-linking agent, however, claim 12 cites 0 parts of glutaric dialdehyde, which indicates the composite does not contain the cross-linking agent. See also claims 13 and 14.

7. Claims 17-22 are indefinite because the claims lack essential steps in the method of making a biodegradable plant protein composite. The omitted step is the amounts of the plant protein and polylactide used for preparing the composite. Claims 17-22 are also indefinite as to at what temperature the mixture is extruding. Claims 18-22 are rejected for being dependent on a rejected claim and not correcting the deficiency of the claim from which it depend.

8. Claim 23 is indefinite because the claim does not cite the amount of each component contained in the composite, it is not clear what composition the protein composite has.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 17, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Tomka (US Patent 6,214, 907, filed September, 1998).

Tomka teaches a preparation of a biologically degradable polymer mixture by mixing starch and at least one hydrophobic polymer (column 4, lines 35-45), wherein the at least one hydrophobic polymer is biologically degradable and thermoplastically processable and can be polylactic acid, a zein and a mixture thereof (column 6, lines 1-13; claim 9 of 907' patent), and the biologically degradable polymer mixtures are suitable for injection molding or extrusion application (column 11, lines 46-63; claim 17). In the preparation of the biologically degradable polymer mixture, a cross-linking agent such as acid-anhydride can be used (column 7, lines 10-18; claim 21), and a plasticizer can be added (column 8, lines 34-42; claim 22). Polylactic acid is another form of polylactide and has the same function as polylactide, and zein is a protein obtained from corn, which meets the criteria of the claim.

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Conclusion

10. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (703) 308-9437. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low, Ph. D. can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-0294 for regular communications and (703) 308-4227 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Chih-Min Kam, Ph. D.
Patent Examiner

CMK

Christopher S. Low

August 4, 2003

**CHRISTOPHER S. F. LOW
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